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Insulation member suitable for vacuum chamber contg. high temp plasma - consists of substrate of molybdenum, niobium, tantalum, tungsten, aluminium nitride, silicon carbide etc. and ceramic insulation layer  
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Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
JP 3201322	A	19910903	JP 89340956	A	19891226		199141 B

Priority Applications (No Type Date): JP 89340956 A 19891226

Abstract (Basic): JP 3201322 A

In a member consisting of a substrate and an insulation layer on the substrate surface, the substrate consists of at least one material selected from Mo, Nb, Ta, W, AlN, SiC and Si<sub>3</sub>N<sub>4</sub>, and the insulation layer contains at least one ceramics layer composed of at least one of SiC, Si<sub>3</sub>N<sub>4</sub>, AlN and diamond, and the layer has the thickness of 1 micron-500 micron.

The substrate is pref. composed of sintered body, and pref. has similar thermal expansion coefft. to that of the insulation layer. A buffer layer e.g. composed of Cu-W alloy and having a thickness of 5 mm may be applied between the substrate surface and the insulation layer when the difference in the thermal expansion coefft. of the substrate and the insulation layer is large to relieve the thermal stress.

USE/ADVANTAGE - Shows excellent heat resistance, insulation property, thermal shock resistance and impact resistance, and it is suitable as material for vacuum chamber of high temp. plasma container. (4pp Dwg.No 4/5)

Title Terms: INSULATE; MEMBER; SUIT; VACUUM; CHAMBER; CONTAIN; HIGH; TEMPERATURE; PLASMA; CONSIST; SUBSTRATE; MOLYBDENUM; NIOBIUM; TANTALUM; TUNGSTEN; ALUMINIUM; NITRIDE; SILICON; CARBIDE; CERAMIC; INSULATE; LAYER

Derwent Class: L03; X12; X14

International Patent Class (Additional): G21B-001/00; H01B-017/60

File Segment: CPI; EPI

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